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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/770,322	01/26/2001	Ronald E. Huffman	12373.16US01	7517
23552	7590	01/24/2005	EXAMINER	
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			LEWIS, RALPH A	
			ART UNIT	PAPER NUMBER
			3732	

DATE MAILED: 01/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

5P

Office Action Summary	Application No. 09/770,322	Applicant(s) HUFFMAN, RONALD E.	
	Examiner Ralph A. Lewis	Art Unit 3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31,33-43 and 45-55 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 47-49 is/are allowed.
- 6) ☒ Claim(s) 1-31,33-43,45 and 51-55 is/are rejected.
- 7) ☒ Claim(s) 46 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Objection to the Claims

Claims 9 and 21-26 are objected to under 37 CFR 1.75(a) for failing to particularly point out and distinctly claim the subject matter which applicant regards as his/her invention.

In claim 9, the limitation that the "slot is formed in an articulated attachment bar" which is "detachably engaged with said first end of the dental model" contradicts parent claim 1 which requires a "single piece encasement member" that is "inseperable" from the stone member and parent claim 8 requires that the "encasement member include[] a slot." Clarification and correction is required.

In claim 21, line 5, there is no antecedent basis for "the upper and *lower support surfaces*."

Rejections based on Prior Art

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 1, 2, 4, 11-13, 15, 16, 18, 20, 27, 28, 30, 31, 33-35, 37, 43, 51 and 53 are rejected under 35 U.S.C. 102(b) as being anticipated by Darnand (5,100,317).

Darnand discloses a stone member 13, 14 corresponding to a portion of a patient's gum line, a single piece encasement member 6 having a cavity in which the stone member is cast and a structure 21 within the cavity that fixedly retains the stone member within the cavity (note particularly, column 4, lines 25-29). In regard to claim 2, note concave socket 10 at one end and latch member 9 at the opposite end. In regard to claim 4, note attachment plate 3. In regard to claims 13 and 27, note the dental model support surface 7, rigid wall 6 defining a cavity and structure 21 (Figure 1) extending along a short length of the cavity for fixedly engaging the cast dental model base 13. In regard to claim 16, note hemispherical socket 10 and latch receiver 9. In regard to claim 18, the Darnand encasement member 6 is "attachable" in such a manner. In regard to claim 30, the recess 10 is capable of being engaged with a ball connector. In regard to claim 31, the encasement member 6 is capable of being connected in such a manner. In regard to claim 43, note Figures 7 and 8 with stone member 15 and dental model 17 with at least one pin 18.

Claims 41 and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by Dew (3,436,827).

Dew discloses an encasement member 30 defining a cavity in which the stone member is cast (note column 3, lines 52-72). The encasement member has a wall 32, 34 which extends continuously about "a circumference" of the cavity. An attachment plate 12 is removably connected to the encasement member 30. Applicant's amendment that the wall "extends continuously around

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a circumference of the cavity" is interpreted as including within its scope "a partial" circumference rather than "the entire" circumference.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 5-7, 16-18, 29, 30, 34, 35, 37, 38, 40, 52 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Darnand (US 5,100,317) in view of Westdyk (US 5,360,337) and Ferrell (US 5,007,829).

In Darnand, the encasement member 6 includes a conical recess 10 for receiving truncated cone 11 which secures the encasement member 6 to attachment plate 3, rather than a spherical recess socket that receives a ball for holding the encasement member in place as required by the present claims. Westdyk (spherical ball 58 received in socket 74) and Farrell (spherical ball 31 in socket) teach the conventional use of prior art ball and socket attachments between encasement members and attachment plates. To have merely replaced the truncated cone 11 and conical recess 10 with a conventional prior art ball and socket connection which is taught to be commonly used in the art by Westdyk and Farrell would have been obvious to one of ordinary skill in the art as a substitution of one known commonly used connection means for another.

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Claims 5, 8, 9, 14, 17-19, 30, 31, 33, 40, 52, 54 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Darnand (US 5,100,317) in view of Huffman (US 4,548,581).

In Figures 7 and 8, Darnand teaches the use of the encasement member with stone model in an articulator that appears to provide for only a simple hinged movement about a single axis. Huffman, however, teaches that by providing for a slot 54, 60 in the attachment plate that tongued member 52, 58 with articulator ball and socket may be attached that allows for more accurate positioning of the tooth models with respect to one another in an articulator. To have provided the Darnand attachment plate 3 with a slot so that a tongued ball and socket articulator member may be attached which allows for more accurate positioning of the models as taught by Huffman would have been obvious to one of ordinary skill in the art. In regard to claim 14, Huffman teaches the conventional articulation of a full arch. To have modified the Darnand device to provide for a model of a full arch as taught by Huffman so that the whole jaw member may be observed would have been obvious to one of ordinary skill in the art.

Claims 10, 21, 23, 24, 26, 39 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Darnand (US 5,100,317) in view of Marshall et al (US 3,702,027).

In Darnand a recess 21 is provided in the encasement member 6 anchor the plaster model to the encasement (column 4, lines 25-28) rather than the claimed projection. Projections for anchoring plaster stone members to encasement members are known, however, as taught by Marshall et al at 60. Merely, substituting one known prior art surface irregularity (a projection) for another known prior art surface irregularity (recess) for securing the plaster within

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the encasement member would have been obvious to one of ordinary skill in the art.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Darnand (US 5,100,317) in view of Marshall et al (US 3,702,027) as applied above with respect to claim 21 in further view of Dew (US 3,436,827).

Dew teaches constructing such encasement members of transparent plastic so that the model may be visually checked (see column 5, line 75- column 6, line 9). To have made the Darnand encasement member of a transparent plastic so that the model may be visually checked as taught by Dew would have been obvious to one of ordinary skill in the art.

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Darnand (US 5,100,317) in view of Marshall et al (US 3,702,027) as applied above with respect to claim 21 in further view of Huffman (US 4,548,581).

In Figures 7 and 8, Darnand teaches the use of the encasement member with stone model in an articulator that appears to provide for only a simple hinged movement about a single axis. Huffman, however, teaches that by providing for a slot 54, 60 in the attachment plate that tongued member 52, 58 with articulator ball and socket may be attached that allows for more accurate positioning of the tooth models with respect to one another in an articulator. To have provided the Darnand attachment plate 3 with a slot so that a tongued ball and socket articulator member may be attached which allows for more accurate positioning of the models as taught by Huffman would have been obvious to one of ordinary skill in the art.

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Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Darnand (US 5,100,317) in view of Dew (US 3,436,827).

Dew teaches constructing such encasement members of transparent plastic so that the model may be visually checked (see column 5, line 75- column 6, line 9). To have made the Darnand encasement member of a transparent plastic so that the model may be visually checked as taught by Dew would have been obvious to one of ordinary skill in the art.

Allowable Subject Matter

Claims 47-50 are allowed. Claim 46 is objected to as be dependent on a rejected base claim, but would be allowable if rewritten in independent form to include all of the limitations of the claims from which it depends.

Response to Applicant's Remarks

Applicant's remarks have been considered but are deemed moot in view of the new grounds/ new interpretation of the prior art as set forth above.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR

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system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication should be directed to **Ralph Lewis** at telephone number **(571) 272-4712**. Fax (703) 872-9306. The examiner works a compressed work schedule and is unavailable every other Friday. The examiner's supervisor, Kevin Shaver, can be reached at (571) 272-4720.

R.Lewis
December 14, 2004


Ralph A. Lewis
Primary Examiner
Au3732